

# PATENT COOPERATION TREATY

MP/Co  
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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Amended Version

PCT

## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

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|--|-----------------------|
| To:  |                       |
| PLAGGENBORG, Menko, Bernard<br>Octroibureau Los en Stigter B.V.<br>Weteringschans 96<br>NL-1017 XS Amsterdam<br>PAYS-BAS |                       |
| App.   | WO 800254             |
| Ingok.   | 04 JUNI 2003          |
| Termijn  | 31/01/2004 30/09/2003 |

Date of mailing  
(day/month/year) 02.06.2003

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| Applicant's or agent's file reference<br>800254-MP/co          |  |
| International application No.<br>PCT/NL02/00463                | International filing date (day/month/year)<br>12/07/2002 |
| Priority date (day/month/year)<br>31/07/2001                   |  |
| Applicant<br>STICHTING VOOR DE TECHNISCHE WETENSCHAPPEN et al. |  |

### IMPORTANT NOTIFICATION

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

For the purpose of deciding whether the claimed invention is patentable or not, the elected Offices may apply criteria additional to or different from the criteria on which the international preliminary examination report is based (see Articles 27(5), 33(5)). Additional criteria may include e.g. exemptions from patentability and the requirements of enabling disclosure and of clarity and support of claims.

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|--|---|
| Name and mailing address of the IPEA/<br>European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized officer<br>Myers, J<br>Tel. +49 89 2399-8111 |
|--|---|



**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

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|---|--|---|
| Applicant's or agent's file reference<br><br>800254-MP/co   | <b>FOR FURTHER ACTION</b>                                    | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No.<br><br>PCT/NL02/00463   | International filing date (day/month/year)<br><br>12/07/2002 | Priority date (day/month/year)<br><br>31/07/2001  |
| International Patent Classification (IPC) or national classification and IPC<br><br>H01F1/01  |  |   |
| Applicant<br><br>STICHTING VOOR DE TECHNISCHE WETENSCHAPPEN et al.  |  |   |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>   |  |   |
| <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul> |  |   |

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| Date of submission of the demand<br><br>17/01/2003   | Date of completion of this report<br><br>02.06.2003                      |
| Name and mailing address of the international preliminary examining authority:<br><br>European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized officer<br><br>Hoyer, W<br><br>Telephone No. +49 89 2399 8439 |



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NL02/00463

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):  
**Description, pages:**

1-8 as originally filed

**Claims, No.:**

1-17 as originally filed

### **Drawings, sheets:**

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages:  
 the claims, Nos.:

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EXAMINATION REPORT**

International application No. PCT/NL02/00463

the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*  
**see separate sheet**

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

the entire international application.  
 claims Nos. 1 ("main claim secondary request").

because:

the said international application, or the said claims Nos. 1 ("main claim secondary request") relate to the following subject matter which does not require an international preliminary examination (*specify*):  
**see separate sheet**

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

the written form has not been furnished or does not comply with the standard.  
 the computer readable form has not been furnished or does not comply with the standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N) Yes: Claims 2 - 17

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No: Claims 1

Inventive step (IS) Yes: Claims 2 - 17  
No: Claims 1

Industrial applicability (IA) Yes: Claims 1 - 17  
No: Claims

2. Citations and explanations  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NL02/00463

**Re Item I**

**Basis of the report**

1. The amendments filed with the letter dated 01.04.2003 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the following:
  - 1.1 The feature "being crystallized in the hexagonal  $Fe_2P$  structure" could not be traced in the originally filed documents. The submission of the applicant in the above letter that it would be doubtlessly "clear for a man skilled in the art that all materials of the present invention crystallize in the  $Fe_2P$  structure" is regarded as an unsubstantiated assertion.
2. Consequently, the International Preliminary Examination Report is based on claims 1 - 17 as originally filed.

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

There is no provision in the PCT for alternative or auxiliary requests. Thus, the request indicated as "Amended Main Claim Secondary Request" is disregarded and only the request indicated as "Amended Main Claim First Request" is considered for this International Preliminary Examination Report. Furthermore, it appears *prima facie* that the amendments in claim 1 according to the "Secondary Request" have also no basis in the originally filed documents.

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: K.SATO ET AL: 'Transport properties of  $Mn_{2-x}Cr_xSb$  near antiferro-ferrimagnetic transition point' JOURNAL OF APPLIED PHYSICS, vol. 55, no. 6, 15

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NL02/00463

March 1984 (1984-03-15), pages 2036-2038, XP001108898 AMERICAN INSTITUTE OF PHYSICS, NEW YORK, US ISSN: 0021-8979

D2: T.BITHER ET AL: 'New modified Mn<sub>2</sub>Sb compositions showing exchange inversion' JOURNAL OF APPLIED PHYSICS., vol. 33, no. 3, March 1962 (1962-03), pages 1346-1347, XP002217192 AMERICAN INSTITUTE OF PHYSICS, NEW YORK, US ISSN: 0021-8979

D3: EP-A-0 400 263 (IBM) 5 December 1990 (1990-12-05)

- 1.1 D1 discloses in Figure 5 Mn<sub>1.88</sub>Cr<sub>0.12</sub>Sb which is a magnetic material. The formula can be recalculated e.g. to (Mn<sub>0.94</sub>Cr<sub>0.06</sub>)<sub>2</sub>Sb which falls under the definition of claim 1. The material shows a variation of the thermal conductivity as a function of the temperature (see paragraph III. "results and discussion"). Consequently, this material is considered to be suitable for magnetic refrigeration.
2. According to the comments above, claim 1 does not meet the requirements of Art. 33(2) PCT.
3. The subject-matter of claims 2 - 8, when read in combination with claim 1, and of claims 9 - 17 is not known or implied by the above prior art documents.